



WATER RESOURCES RESEARCH GRANT PROPOSAL

Title: Mitigation of High Stream Temperatures in the Tualatin River Basin: An opportunity for effluent credit trading

Duration: April 1, 1999-September 30, 2000

Fiscal Year 1999 Federal Funds:

- Total: \$14,689
- Direct: \$14,689
- Indirect: \$0

Non Federal Funds:

- Total: \$48,274
- Direct: \$7,960
- Indirect: \$7,314

Principal Investigators: Marshall English, OSU/BRE, J. Ronald Miner, OSU/BRE, Matthew Boyd, ODEQ

Congressional District: Oregon 5th

Critical Need for Research

According to the 303(d) list for Oregon, exceedance of temperature standards has been identified as a problem in approximately 700 Oregon streams, far more streams than are impacted by any other water quality parameter. And heat loading is not only an extensive problem, it can also be an intractable problem. Discussions with watershed councils have indicated that it is often the most challenging water quality program they face, and extraordinary efforts may be needed to achieve required temperature standards in many of the watersheds of the state. The Tualatin River Basin in particular has been singled out by the state (at the level of the Governor's office) as having the highest priority for mitigation of temperature problems.

Given the dispersed nature of many sources of heat-loading, this must be regarded as a problem in non-point source pollution. Combating NPS pollution requires the fullest cooperation of local stakeholders. The possibility of effluent credit trading serves as an incentive for those closest to the sources of non-point source pollution to make aggressive efforts to mitigate the pollution. It also provides a basis for identifying and financing least-cost mitigation measures, and may inspire innovative approaches to pollution control that would otherwise not be found.

Expected results, benefits, information

This project will provide critical technical guidance on several promising measures for mitigating high stream temperatures and technical guidance also on how to utilize effluent credit trading as a tool for financing such mitigation measures. This information will be valuable to stakeholders in the Tualatin Basin, as well as their counterparts in most of the other watersheds in Oregon. It will also provide important insights for the regulatory agencies charged with oversight of TMDL planning.

As an additional benefit, this project will lay the groundwork for a subsequent proposal to ODEQ for a pilot effort in effluent credit trading in Oregon, in response to an anticipated request for proposals which is expected to be published this year by ODEQ.

Objectives

The project would have two broad objectives: first, to better understand potential mitigation measures for dealing with high stream temperatures, and second, to explore the possibility financing mitigation measures using effluent credit trading. Specific project objectives will be:

- 1 . Conduct an engineering analysis of selected temperature mitigation measures which could be considered for effluent credit trading.
2. Propose a framework for credit trading involving the most promising of these options.
3. Conduct a public information program dealing with both effluent credit trading and management of thermal pollution.